SERVICE MANUAL
& PARTS LIST (without price)

SF-5580E/5780E/5980E (ZX-877)

JAN. 1997

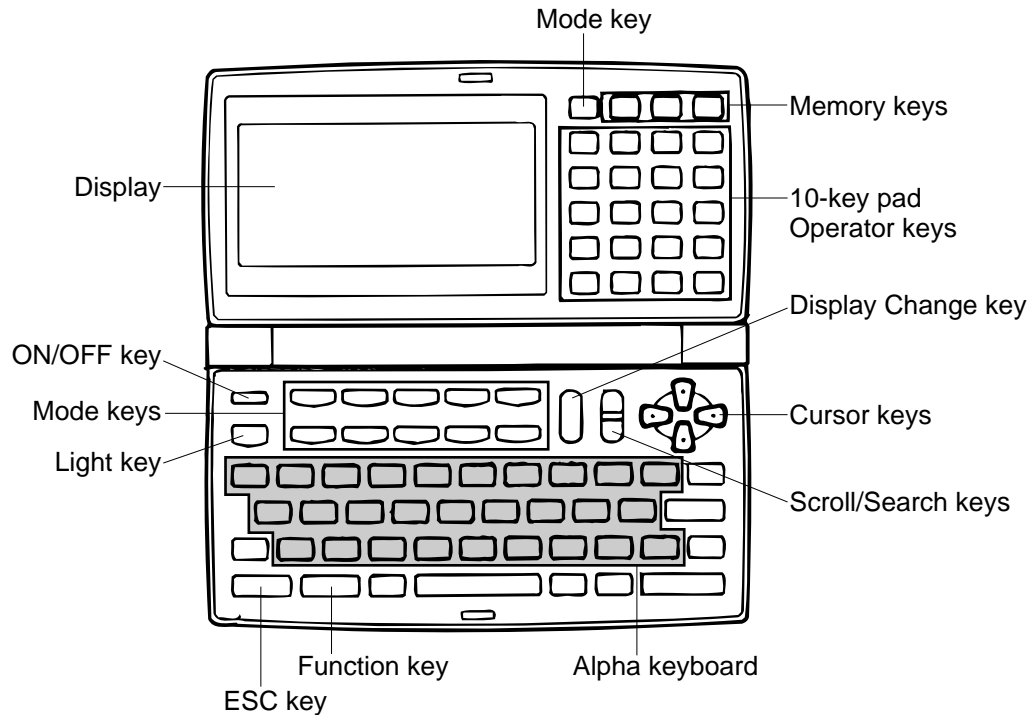SF-5980E

CASIO®

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1. GENERAL GUIDE, RESET OPERATION & BATTERY REPLACEMENT

Mode key

Memory keys

Display

10-key pad
Operator keys

Display Change key

ON/OFF key

Mode keys

Cursor keys

Light key

Scroll/Search keys
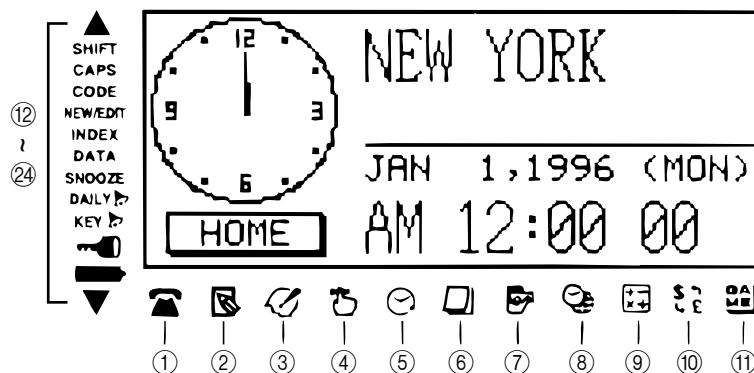
Function key

Alpha keyboard

ESC key

■ Display

When lighting is dim, you can turn on an EL (electro-luminescent) backlight for easier viewing.

To turn on the EL backlight

Press the **LIGHT** key to light up the display for about 15 seconds. Pressing **LIGHT** while the EL backlight is on turns it off.

Display Indicators

① Telephone Directory Mode
② Memo Mode
③ To Do Mode
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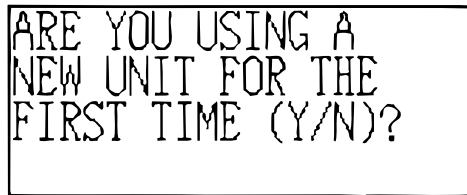㉓ Low battery warning
㉔ Indicates data below

■ All-Reset

Use the following procedure to reset the unit to its initial settings.

Important!
- Do not use a very sharp pencil or other object to press the RESET button.
- Be sure to reset the unit before using it for the first time.
- Perform the reset operation only after main batteries and back-up battery are correctly installed.
- Be sure to press the RESET button after loading main batteries for the first time or if the previous set of batteries went dead.

To start the all-reset operation

1. Turn power off.

2. Press the RESET button on the back of the Digital Diary with a thin, pointed object.
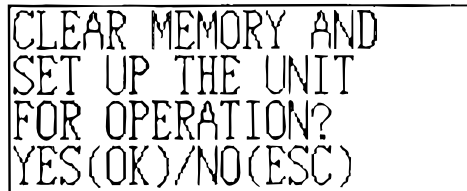
```
ARE YOU USING A
NEW UNIT FOR THE
FIRST TIME (Y/N)?
```

3. Now you should press **Y** for "yes" or **N** for "no" in accordance with the conditions described below.

When to press Y for "yes"
- When this is the first time you are using the unit.
- When you want to reset the unit and clear all data and settings.
- When you are resetting the unit after a data error (page 13).

1. Press **Y** in response to the message that appears on the display when you start the all-reset operation.

```
CLEAR MEMORY AND
SET UP THE UNIT
FOR OPERATION?
YES(OK)/NO(ESC)
```

2. Press **OK** to reset the Digital Diary or **ESC** to abort.
- At this time the message "SET TIME!" appears.
- After about two seconds, the Home Time screen appears.

3. Press **FUNC**, select "Time set", and then use the procedure on page 18 of Owner's Manual to set the Home Time.
- If you turn power off without setting the Home Time, the "SET TIME!" message appears the next time you turn power on. The Digital Diary will not operate properly until you set the Home Time.

When to press N for "no"
- After replacing the main batteries.
- When you are not resetting the unit to clear all data and settings.
- When you are not resetting the unit after a data error (page 13).

1. Press **N** in response to the message that appears on the display when you start the all-reset operation.
- At this time the message "SET TIME!" appears.
- After about two seconds, the Home Time screen appears.

2. Press **FUNC**, select "Time set", and then use the procedure on page 18 of Owner's Manual to set the Home Time.
   - If you turn power off without setting the Home Time, the "SET TIME!" message appears the next time you turn power on. The Digital Diary will not operate properly until you set the Home Time.
   - Following are the initial settings of the unit after you perform the all-reset operation.

Home Time:	New York
	JAN 1, 1996 (MON)
	12:00 AM
	12-hour format
World Time:	London
Daily Alarm:	12:00 AM
Sound:	Daily alarm — OFF
	Key — ON
Messages:	English
Character input:	CAPS — OFF

■ Power Supply

Your Digital Diary is powered by two AAA-size batteries, and its memory is protected by a single CR2032 lithium battery.

Low battery Warning
The message, "MAIN BATTERIES WEAK! REPLACE THEM! UNIT WILL NOT TURN ON AGAIN!" appears when battery power is low. Replace the main batteries immediately after this message appears. **After replacement of the main batteries, execute RESEToperation. (refer to 4 page)**

Important!
   - After the low battery message appears on the display, the unit automatically turns off in about 10 seconds and will not turn back on again until you replace batteries.
   - Never replace main batteries while the Digital Diary is turned on (while there are figures on the display).
   - There is not low battery warning for the back-up battery. Be sure to replace the back-up battery once every 5 years.
   - Be sure you keep a separate copy of all important data that you store in the Digital Diary.

Battery Precautions
Incorrectly using batteries can cause them to burst or leak, possibly damaging the interior of the Digital Diary. Note the following precautions.
   - Be sure that the positive (+) side of each battery is facing in the correct directions.
   - Never mix batteries of different types.
   - Never mix old batteries and new ones.
   - Do not expose batteries to direct heat, let them become shorted, or try to take them apart.
   - Never leave dead batteries in the battery compartment.
   - Remove batteries if you do not play to use the unit for a long time.
   - Replace batteries at least once every five years, no matter how much you use the unit during that period.
   - Never try to recharge the batteries that come with the unit.
   - Should a battery leak, clean out the battery compartment of the unit immediately, taking care to avoid letting battery fluid come into direct contact with your skin.

Keep batteries out of the reach of small children. If swallowed, consult with a physician immediately.

To replace the main batteries

Important!
- Do not remove the main batteries from the Digital Diary while the back-up battery is removed.
- Be sure to replace both batteries with two new ones. Do not mix an old battery with a new one.
- Be sure to press the RESET button (page 2) after loading main batteries for the first time or if the previous set of batteries went dead.

1. Press **OFF** to turn power off.

2. Remove the screw that holds the battery compartment cover in place and open the cover.
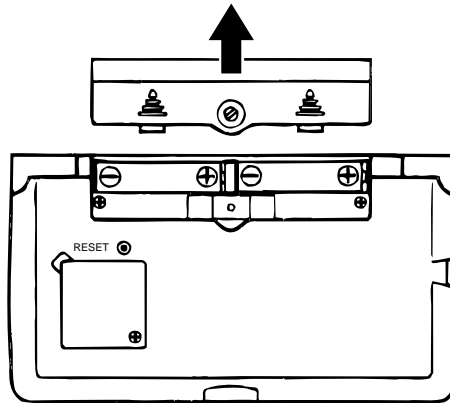
3. Remove both old batteries and replace them with new ones.
- Make sure that the positive (+) and negative (–) ends are facing correctly.

4. Replace the battery compartment cover and secure it with its screw.
- Take care that you do not overtighten the screw.

5. Press the RESET button.
- This causes the message "ARE YOU USING A NEW UNIT FOR THE FIRST TIME (Y/N)?" to appear. Be sure to press **N** in response to this message (pressing **Y** will delete all data in memory). Next, continue with the procedures in the section title "All-Reset" on page 2.

To replace the back-up battery

Important!
- Do not remove the back-up battery from the Digital Diary while the main batteries are removed.
- Be sure to replace the back-up battery at least once every 5 years. Otherwise, you run the risk of losing data stored in memory.

1. Press **OFF** to turn power off.

2. Remove the screw that holds the back-up battery compartment cover in place and open the cover.

3. Insert a thin, pointed object into (A) and remove the old battery.

4. Load a new battery into the compartment, making sure that its positive side is facing up (so you can see it).

5. Replace the battery compartment cover and secure it with its screw.
 • Take care that you do not overtighten the screw.

■ Turning Power On and Off
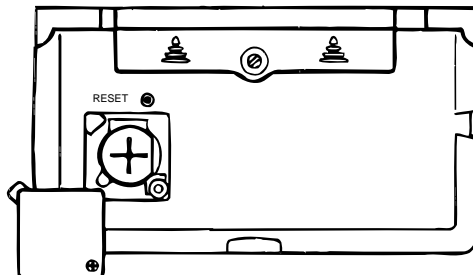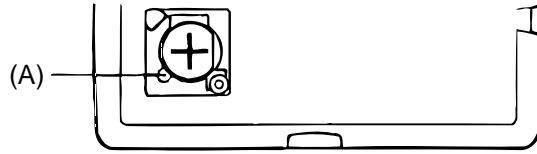
Press **ON/OFF** to turn power on and off.

Important!
 • If nothing appears on the display when you turn on power, it means that the main batteries are low. Replace the batteries (page 4) and press the RESET button to resume normal operation.

Auto Power Off Function
The unit automatically turns power off if you do not press any key for about three minutes. Any alarms you set still sound, even if power is turned off.

■ Function Menus

 • Pressing **FUNC** displays a function menu, whose contents differs depending on the mode.
 • Pressing **SHIFT FUNC** displays a function menu of general system settings (system function menu).
 • Input the number of the left of the function you want to use to select it.
 • To exit from a function menu, press **ESC**.

■ System Language

Your Digital Diary is capable of producing messages in any one of three languages (English, German, Italy).

To select the system language

1. Press **SHIFT FUNC** and then select "Language".

2. Press the number key that corresponds to the language that you want to use.
 • To select "ENGLISH", you would press **1**.
 • The system language automatically changes to English whenever you perform the RESET operation (page 2).

Note
 • In this manual, all display messages are shown in English.

■ Display Contrast

Use the following procedure to make the figures on the display darker or lighter.

To adjust display contrast

1. Press **SHIFT FUNC** and then select "Display contrast".

2. Use ◄ and ► to make display images darker or lighter.

3. Press **OK** to quit.

■ Key Input Sound

When the key input sound is turned on, your Digital Diary emits a beep each time you press one of its keys.

To turn key input sound on and off

1. Press **SHIFT FUNC** and then select "Key tone."

Currently selected setting

```
┌─────────────────────────────────┐
│ Key tone            ■ON    OFF   │
│                                  │
│                                  │
│                                  │
└─────────────────────────────────┘
```
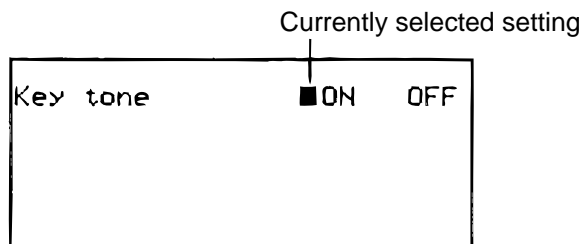
2. Use ◄ and ► to turn the key input sound on and off.
• The KEY 🔊 indicator is on the display while the key input sound is on.

3. Press **OK** to quit.

■ Destructive Backspace

When destructive backspace is turned on, the character at the cursor position is deleted when you press the **BS** key.

To turn destructive backspace on and off

1. Press **SHIFT FUNC** and then select "Backspace".

2. Use ◄ and ► to turn destructive backspace on and off.

3. Press **OK** to quit.

2. SPECIFICATIONS

Model: **SF-5580E/SF-5780E/SF-5980E**

Main Modes:
Telephone Directory, Memo, Schedule Keeper, To Do, Expense Manager, Reminder, Calendar, Home Time, World Time, Calculator, Conversion (metric/currency) and Game (Poker/Blackjack)

Data storage:
Storage and recall of telephone, memo, schedule, to do, expense, reminder data; calendar display; editing; memory status display

Clock:
World time; reminder alarm; schedule alarm; daily alarm; accuracy under normal temperatures: ± 3 seconds average

Calculation:
12-digit arithmetic calculations; arithmetic constants (+, −, ×, ÷); independent memory; percentages; square roots; other mixed calculations

General:

Display element:	26-column × 8-line LCD
Memory capacity:	SF-5580E: 128 KB
	SF-5780E: 256 KB
	SF-5980E: 512 KB
Main component:	LSI

Power supply:
      Main: Two AAA-size batteries (Type: LR03 (AM4))
      Back-up: One CR2032 lithium battery

Battery life:
      Main: In Telephone Mode, approximately 100 hours continuous display; approximately 70 hours with 5 minutes operation and 55 minutes continuous display per hour; approximately 60 hours with 5 minutes operation and 52 minutes continuous display, and 3 minutes backlight operation per hour
      Back-up: 5 years if main batteries are replaced as soon as they become weak. 6 months if dead main batteries are left in the unit.

Power consumption: 0.25 W

Current consumption:
      Main (Input voltage = 3.0 V):   Telephone top menu (Light from EL doesn't shine)- 3.9 mA (TYP.)/4.8 mA (MAX.)
                                         Telephone top menu (Light from EL shines)- 27 mA (TYP.)/38 mA (MAX.)
                                         OFF- 90 µA (TYP.)/120 µA (MAX.)
      Back-up (Input voltage = 3.0 V): 18 µA (TYP.)/40 µA (MAX.)

Auto power off: Approximately 3 minutes after last key operation

Operating temperature: 0 °C ~ 40 °C (30 °F ~ 104 °F)

Dimensions:
      Unfolded: 8.8H × 163W × 169D mm ($^3/_8$"H × 6$^7/_{16}$"W × 6$^5/_8$"D)
      Folded: 21.5H × 163W × 91.5D mm ($^7/_8$"H × 6$^7/_{16}$"W × 3$^5/_8$"D)

Weight: 251 g (8.9 oz) including batteries

■ Memory Capacity

Memory capacity differs according to model.

Model Memory

SF-5580E: 128 Kbyte
SF-5780E: 256 Kbyte
SF-5980E: 512 Kbyte

The following shows the number of items that can be stored in each model.

Telephone Directory

8-character name, 10-character Phone 1 number
SF-5580E/SF-5780E/SF-5980E: 4,000/9,000/19,000

8-character name, 10-character Phone 1 number, 20-character address
SF-5580E/SF-5780E/SF-5980E: 2,000/4,500/9,500

Memo

20-character memo
SF-5580E/SF-5780E/SF-5980E: 3,400/7,700/16,000

To Do

20-character description
SF-5580E/SF-5780E/SF-5980E: 3,200/7,200/15,200

Schedule Keeper

20-character description, alarm time setting
SF-5580E/SF-5780E/SF-5980E: 2,900/6,500/13,500

Reminder

10-character description
SF-5580E/SF-5780E/SF-5980E: 5,000/11,250/23,800

Expense Manager

10-character description
SF-5580E/SF-5780E/SF-5980E: 3,500/7,900/18,600

3. DATA COMMUNICATIONS

You can transfer data between two CASIO SF-5580E,SF-5780E, or SF-5980E units, or between your Digital Diary and a personal computer only. You cannot exchange data with any other CASIO Digital Diary model. Data communications can be performed while in the Telephone Directory, Memo, Schedule Keeper, Calender, To Do, Reminder, or Expense Manager Mode.

■ Setting Up for Data Communications

The following describes what you would do to set up for data communications between two Digital Diary units or between a Digital Diary unit and a personal computer.

To connect to another Digital Diary unit

1. Make sure that the power of both units is turned off.
2. Remove the covers from the data communications jacks on the two Digital Diary units.
3. Connect the two units using the SB-62 cable.

SB-62 cable
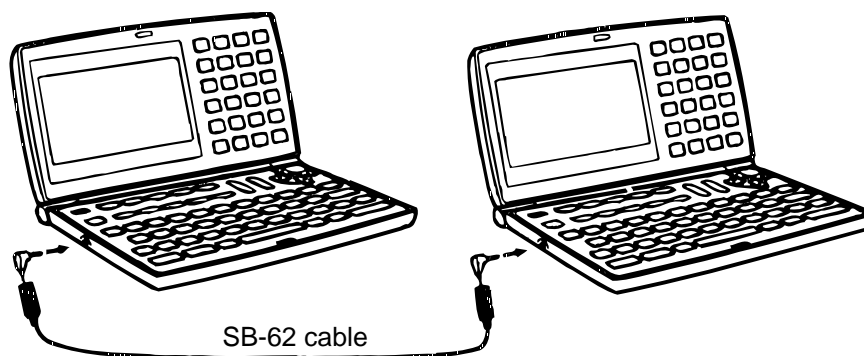
Important!
  • Be sure to replace the connector covers on the Digital Diary units when you are not perfoming data communications.

Performing data communications between a Digital Diary unit and a personal computer
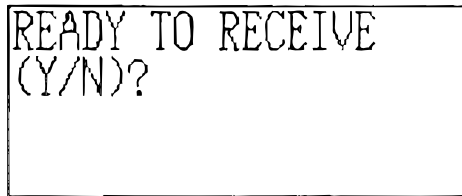
You must purchase an optional CASIO Data Communication Package in order to perform data communication between your Digital Diary unit and a personal computer. Please note that there are a number of different CASIO Data Communication packages to suit various computers and Digital Diary types. Because of this, you should note the following important points when purchasing a Data Communication Package. If you have any question about which package you need, consult with a expert.

  • Make sure the Data Communication Package (FA-127) is designed for you with your particular model of personal computer.
  • For information on how to connect the Digital Diary to a personal computer, see the user's manual that comes with the Data Communication Package (FA-127).

■ REMARK: FA-127 is the Personal Computer Link (software and cable unit) for Windows.

To set up the Digital Diary to receive data

1. While any screen is displayed, press **FUNC** (or **SHIFT FUNC**) and then select "Receive data".
   - You can perform the above operation in the Telephone Directory, Memo, Schedule Keeper, Calendar, To Do, Reminder, or Expense Manager Mode.

```
READY TO RECEIVE
(Y/N)?
```

2. Press **Y**.

```
RECEIVE DATA
PRESS ESC TO QUIT.

            \
```

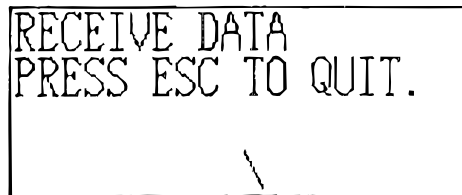- This message indicates that the unit is standing by to receive data.
- To abort the receive operation, press **ESC**.
- This procedure is the same regardless of whether data is being received from another Digital Diary unit or from a personal computer.

■ Sending Data

This section tells you how to operate the Digital Diary to send data to another unit or to a personal computer.

About data transfer types…

There are a number of ways you can transfer data.

All Data Items

With this method, you can send all data items stored in the Telephone Directory, Memo, Schedule Keeper, Calendar, To Do, Reminder, or Expense Manager Mode.

Mode Data Items

With this method, you can send all data items stored in specific modes (Telephone Directory, Memo, Schedule Keeper, Calendar, To Do, Reminder, Expense Manager).
In the Schedule Keeper Mode, you can send items that appear on the index display (which you specified using the function menu's List type item).

One Data Item

With this method, you can send one data item stored in the Telephone Directory, Memo, Schedule Keeper, To Do, Reminder, or Expense Manager Mode.

Notes
- For Calendar Mode data, you can send highlight data.
- If an alarm (Daily Alarm, Schedule Alarm, or Reminder Alarm) is reached while data is being sent, the alarm does not sound until the data send operation is complete.

To send one data item

1. Display the data display of the item you want to send.

2. Press **FUNC** and then select "Send record".
   • A message appears asking if you are ready to send.

3. Press **Y** to start the send operation, or **N** to abort.
   • To interrupt the send operation at any time, press **ESC**.
   • After the send operation is complete, the display returns to the screen that was on the display before you started the send operation. Then you can repeat the above procedure to send another item.

To send all data items in specific modes

1. Press **SHIFT FUNC** and then select "Send all".

Pointer (selected file)

```
      Send all files
Telephone          →■Yes   No
Schedule            ■Yes   No
Todo                ■Yes   No
Memo                ■Yes   No
Calendar            ■Yes   No
Reminder            ■Yes   No
Expense             ■Yes   No
```

Marker (current setting)

2. Use ▲ and ▼ to move the pointer to the mode whose data items you want to send, and then use ◄ and ► to change the setting.
   • Data in modes set to "Yes" will be sent, while data in modes set to "No" will not.

3. Press **OK**.
   • A message appears asking if you are ready to send.

4. Press **Y** to start the send operation, or **N** to abort.
   • To interrupt the send operation at any time, press **ESC**.
   • After the send operation is complete, the display returns to the screen that was on the display before you started the send operation.

To send Calender data (highlights)

1. In the Calender Mode, press **FUNC** and then select "Send (Holidays)".
   • A message appears asking if you are ready to send.

2. Press **Y** to start the send operation, or **N** to abort.
   • To interrupt the send operation at any time, press **ESC**.
   • After the send operation is complete, the display returns to the screen that was on the display before you started the send operation. Then you can repeat the above procedure to send another item.

■ Send All Data Items In a Mode

The procedure you should use depends on whether the file whose data items you are sending has multiple files (Telephone Directory, Memo, To DO, Expense Manager) or not (Schedule, Reminder).

To send all data items from a multiple file mode (Telephone Directory, Memo, To Do, Expense Manager)

1. Display the initial screen of the mode that contains the data you want to send.
   • You can display the initial screen for any file.

2. Press **FUNC** and then select "Send all files".

```
          Send all files
    TEL-1        ▶■Yes  No
    TEL-2         ■Yes  No
    TEL-3         ■Yes  No
```

3. Use ▲ and ▼ to move the pointer to the file whose data you want to send, and then use ◀ and ▶ to change the setting.
   • Files set to "Yes" will be sent, while those set to "No" will not.

4. Press **OK**.
   • At this time the message "READY TO SEND (Y/N)?" appears.

5. Press **Y** to send or **N** to abort.
   • In the Telephone Directory, Memo, and To Do Modes you can also use another method to send all data items. While the index display or data display is on the screen, press **FUNC** and then select "Send all records". This causes the message "READY TO SEND (Y/N)?" to appear, so press **Y** to send or **N** to abort.

To send all data items from a single file mode (Schedule Keeper, Reminder)

1. Display the initial screen of the mode that contains the data you want to send.

2. Press **FUNC** and then select "Send all records".
   • At this time the message "READY TO SEND (Y/N)?" appears.

3. Press **Y** to send or **N** to abort.

To send listed records in the Schedule Keeper Mode

1. Enter the Schedule Keeper Mode and specify the items you want to send in the index display contents.
   • See "To specify Schedule Keeper Mode index display contents" on this page.

2. While the Schedule Keeper Mode index display is on the screen, press **FUNC** and then select "Send listed records".
   • At this time the message "READY TO SEND (Y/N)?" appears.

3. Press **Y** to send or **N** to abort.

■ To specify Schedule Keeper Mode index display contents

1. Press **SCHEDULE** to display the initial Schedule Keeper Mode screen, and then press ▲, ▼, ⬆, or ⬇ to change to the index display.

2. Press **FUNC** and then select "List type".

Pointer (selected type)

Marker
(Current setting)

```
SCH TYPE 1    ▶■Yes  No
SCH TYPE 2     ■Yes  No
SCH TYPE 3     ■Yes  No
SCH TYPE 4     ■Yes  No
SCH TYPE 5     ■Yes  No
SCH TYPE 6     ■Yes  No
SCH TYPE 7     ■Yes  No
SCH TYPE 8     ■Yes  No
```

3. Use ▲ and ▼ to move the pointer next to the schedule type you want to change, and then use ◀ and ▶ to change the setting.
   • Schedule types set to "Yes" appear in the index display, while those set to "No" do not.

4. Press **OK** to quit and return to the index display.

4. ERROR MESSAGES

Data Error Message
The data error message appears whenever the Digital Diary's internal check discovers a problem with data stored in memory.

```
DATA ERROR!
CHECK YOUR
OWNER'S MANUAL
FOR PROCEDURE!
```

Appearance of the data error message indicates that you must perform the all-reset procedure to correct the problem. Start out with the procedure under "To start the all-reset operation" on page 2, and continue with the procedure under "When to press **Y** for "Yes" on page 2".

Important!
- Even though you are not using the unit for the first time, you must press **Y** (for "Yes") when the unit asks "ARE YOU USING A NEW UNIT FOR THE FIRST TIME (Y/N)?" in order to reset the unit after a data error occurs.

If you still have trouble after trying the RESET operation, you may have a hardware problem. If so, consult with your nearest CASIO dealer.

■ Message Table

Message	Meaning	Action
NOT FOUND! PRESS ESC TO QUIT.	Data specified in search operation does not exist in memory.	Change specification or cancel search.
MEMORY FULL, PRESS ANY KEY.	No more room in memory for storage of data.	Delete unnecessary data items from memory.
ALARM TIME COINCIDENT!	Attempt to set an alarm that is already used for another entry.	Set a different alarm time or change the existing alarm time.
ALARM TIME ALREADY PASSED!	Attempt to set an alarm for a time or data that is already passed.	Set a different alarm time.
DATA COMM. ERROR, PRESS ANY KEY!	Error during data communications.	Cancel the operation and try again.
ARE YOU USING A NEW UNIT FOR THE FIRST TIME (Y/N)?	The reset procedure has started.	See page 2.
CLEAR MEMORY AND SET UP UNIT FOR OPERATION? YES (OK)/NO (ESC)	The reset procedure is in progress.	See page 2.
DATA ERROR! CHECK YOUR OWNER'S MANUAL FOR PROCEDURE!	Data corrupted by strong impact, electrostatic charge, etc..	See this page.
MAIN BATTERIES WEAK! REPLACE THEM! UNIT WILL NOT TURN ON AGAIN!	The main batteries are getting weak.	Replace main batteries immediately (page 4).

5. OPERATION CHECK

REMARKS:
1. **Executing this check, the data stored in this Digital Diary disappear. So if you won't disappear this important data, you should store its data in another Digital Diary (SF-5580E/5780E/5980E) referring to the item 3. Data communications in this manual.**
2. **You can not put out the light from EL while executing this check.**

● LCD CHECK

① Press **RESET** button on the rear panel while pressing **OK** button on the front panel.
LCD display appears as shown right.
(figure-1)
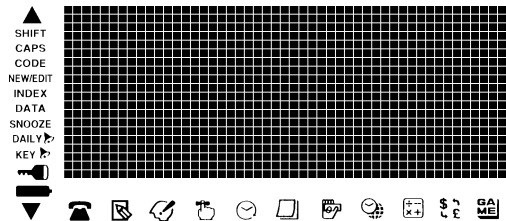
figure-1

② Press **OK** button four times.
LCD display appears as shown right.
(figure-2)
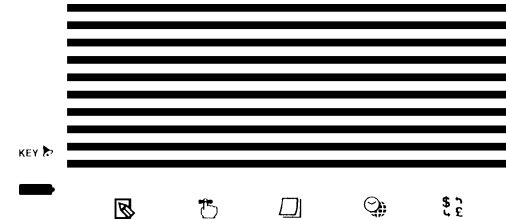

figure-2

③ Then press **OK** button.
LCD display appears as shown right.
(figure-3)

④ Press **OK** button again.
LCD display appears as shown in the **figure-1** again.

figure-3

● ROM CHECK

⑤ Wait 4 ~ 5 seconds, then press **OK** button.

LCD display ⟶ **ROM TEST ROM OK**

● RAM CHECK

⑥ Press **OK** button.

LCD display ⟶ { **ROM TEST ROM OK**
RAM TEST

⑦ Wait about 45 ~ 50 seconds.

In the case of SF-5580E,

LCD display   ⟶   **ROM TEST ROM OK**
RAM TEST 1 2 8 K OK

In the case of SF-5780E,

LCD display   ⟶   **ROM TEST ROM OK**
RAM TEST 1 2 8 K OK
2N D
RAM TEST 1 2 8 K OK

, or

LCD display   ⟶   **ROM TEST ROM OK**
RAM TEST 2 5 6 K OK

In the case of SF-5980E,

LCD display   ⟶   **ROM TEST ROM OK**
RAM TEST 5 1 2 K OK

● **KEY CHECK**

⑧ Press **OK** button.

LCD display   ⟶   **ROM TEST ROM OK**
RAM TEST XXX K OK
KEY TEST

⑨ Press any button. For example, press **TEL** button.

LCD display   ⟶   **ROM TEST ROM OK**
RAM TEST XXX K OK
KEY TEST TEL

After pressing any button, LCD displays a letter or a number correspond to its button.
Check all keys (buttons) in this way except to **OK** button.

● **COMMUNICATION CHECK**

⑩ Press **OK** button.

LCD display   ⟶   **ROM TEST ROM OK**
RAM TEST XXX K OK
KEY TEST XXX

1 COMM 2 ECHO

⑪ Prepare another unit, then execute the procedure described above (1 ~ 10).

Another unit's
LCD display   ⟶   **ROM TEST ROM OK**
RAM TEST XXX K OK
KEY TEST XXX

1 COMM 2 ECHO

⑫ Connect two units using the SB-62 cable as shown by the item **3. DATA COMMUNICATIONS** (page 9) in this manual.

⑬ Press **2** button on any unit (A).

This unit's
LCD display $\longrightarrow$

```
ROM  TEST  ROM  OK
RAM  TEST  XXX K  OK
KEY TEST   XXX


            2 ECHO
```

⑭ Then press **1** button on another unit (B).

Another unit's
LCD display $\longrightarrow$

```
ROM  TEST  ROM  OK
RAM  TEST  XXX K  OK
KEY TEST   XXX

1  COMM   2 ECHO   OK
```

In the case of NG, LCD displays a letter "**FAIL**".
If "**OK**" was displayed, another unit (B) transmitted data to any unit (A).

⑮ Pressing **ESC** buttons on the both units, return to the condition described in the item 12 .
LCD displays on the both units are the same as display shown in the item 11 .

⑯ Next, try to transmit data from the unit (A) to the unit (B).

⑰ Return to the condition described in the item ⑫ using **ESC** button.

⑱ Pressing **ON/OFF** button twice, turn these units off.

6. SCHEMATIC DIAGRAMS
6-1. Z876-1 ASS'Y*5 ~ *7 (1/4)
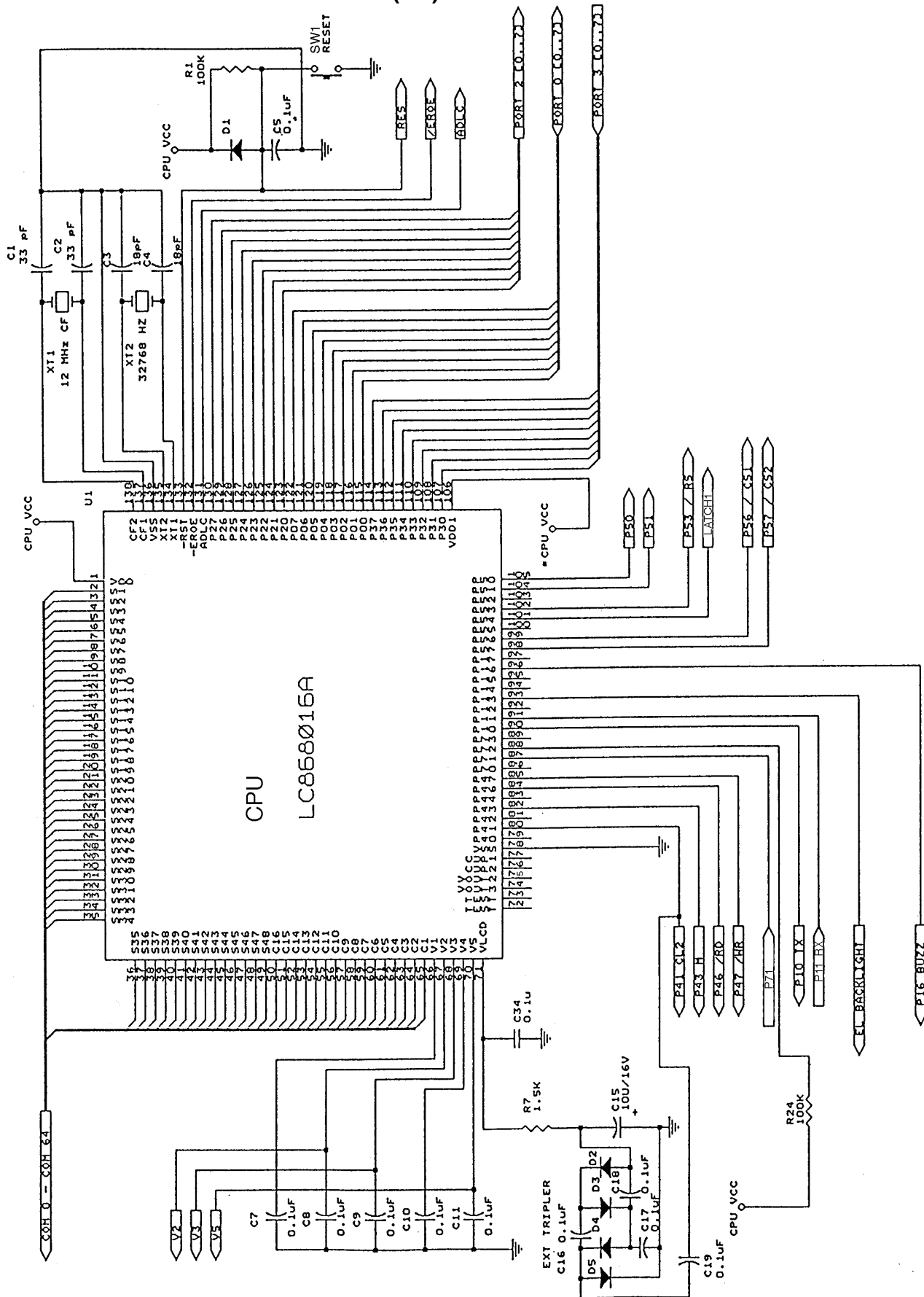
• PLACE 0.1 μF BETWEEN VCC TO GND FOR ALL IC INDIVIDUALLY AS CLOSE AS POSSIBLE
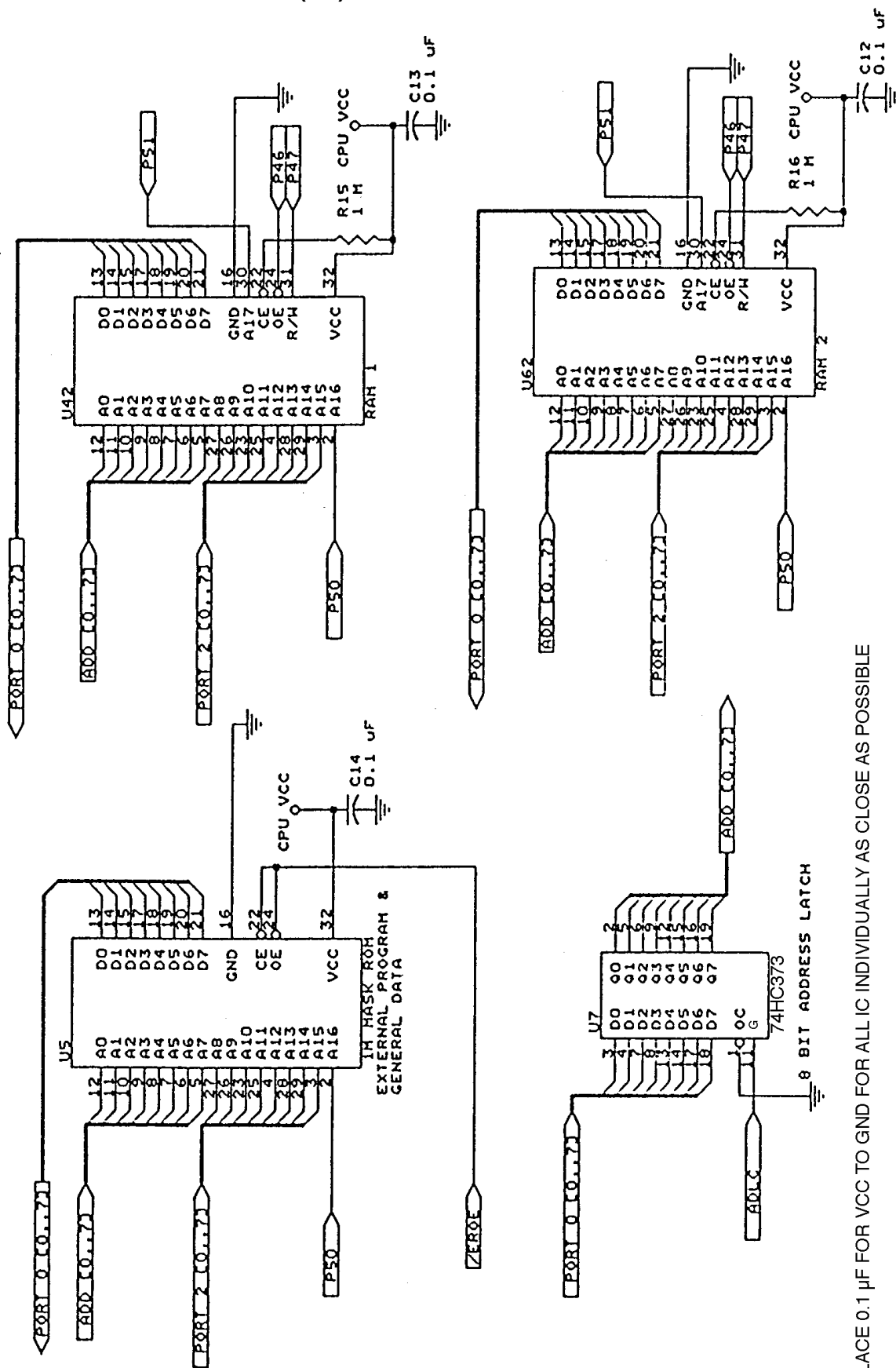
PLACE 0.1 µF FOR VCC TO GND FOR ALL IC INDIVIDUALLY AS CLOSE AS POSSIBLE

* PLACE 0.1 µF FOR VCC TO GND FOR ALL IC INDIVIDUALLY AS CLOSE AS POSSIBLE

EL SUPPLY

C31
0.1UF

EL BACKLIGHT

Q30
M6

R31
10K

* 1 VALUES TO BE CONFIRMED

+ C33
1UF/50V

EL Lamp

R30
220

D353A EL LAMP DRIVER IC

L3
*1 15mH

U30

V+
VREG
VCC
VOUT
GND

L+
CLF1
CLF2
CHF1
CHF2
CLK
E'

L— L—

*1
CLF

*1
CHF

C30
15nF

C32
68pF

C1
C2
C3
C4

2
5
6
9
12
15
16
19

U8

Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8

D1
D2
D3
D4
D5
D6
D7
D8

CLK
CLR

74HC273

CPU VCC

3
4
7
8
13
14
17
18

11
1

P20
P21
P22
P23
P24
P25
P26
P27
LATCH1
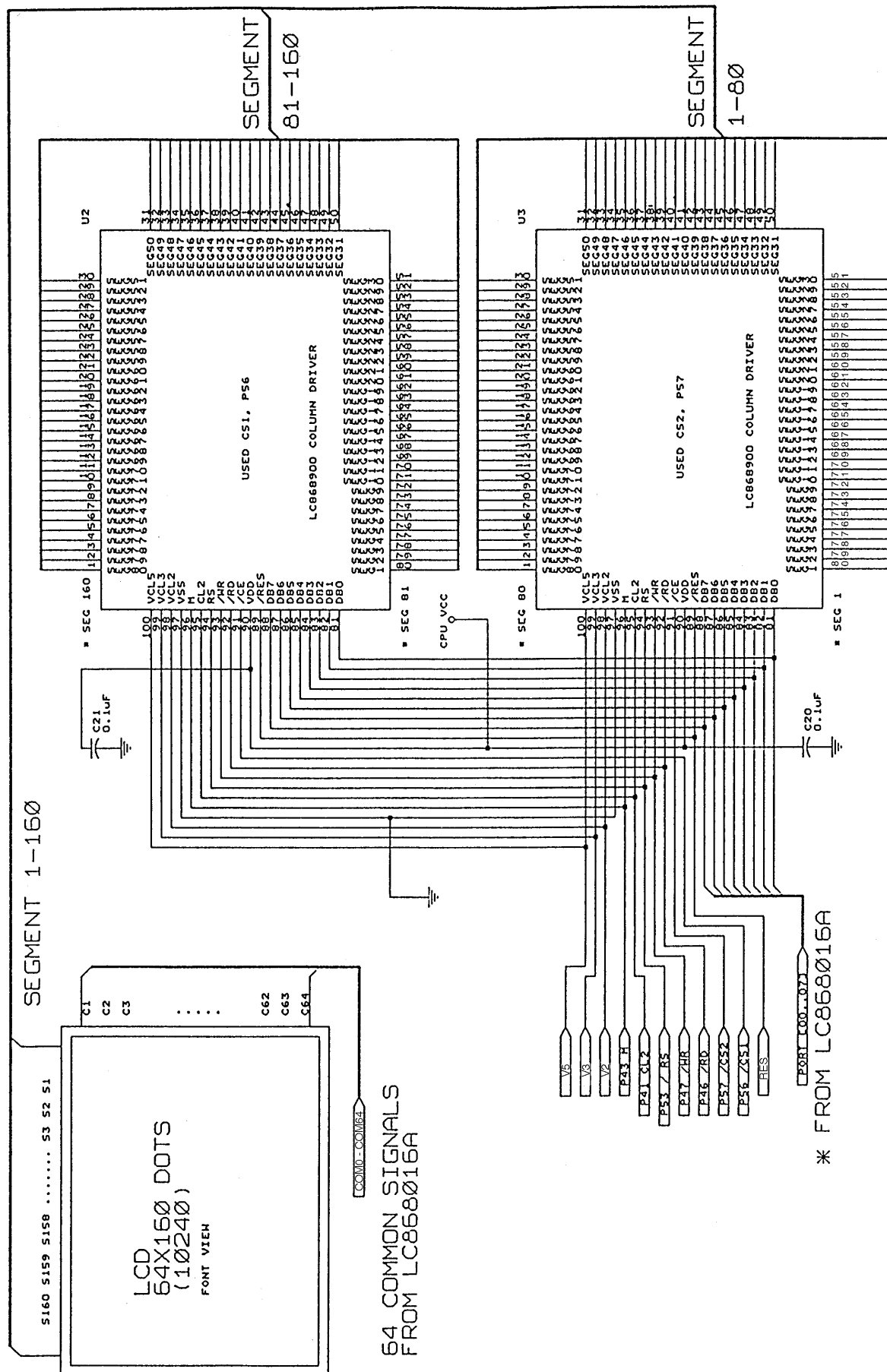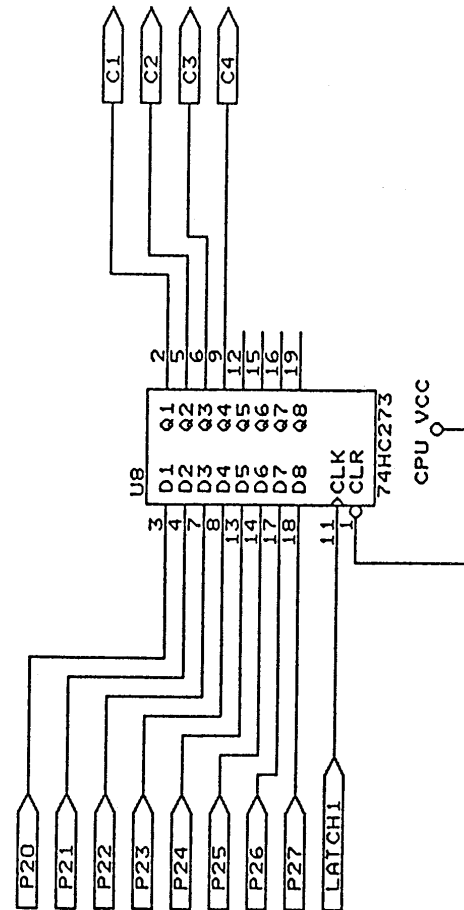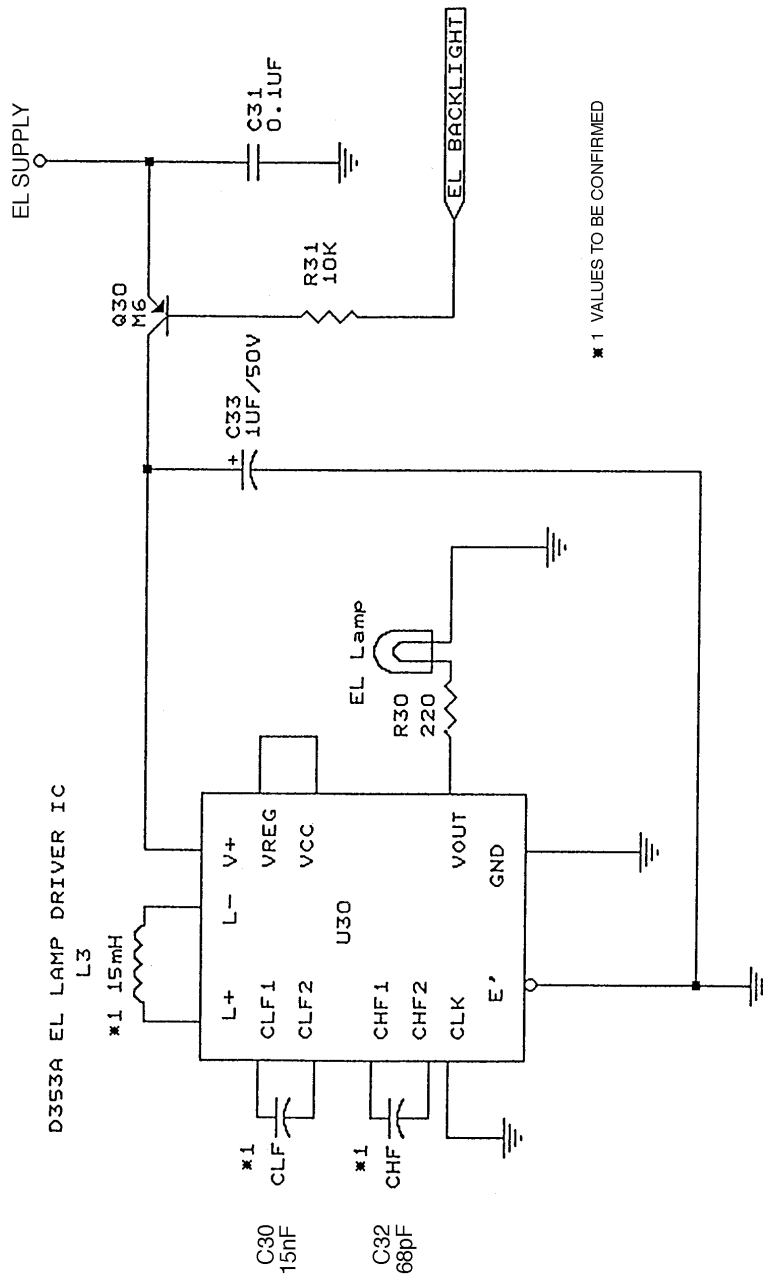
KEYBOARD LATCH

6-2. Z876-2 ASS'Y (2/2)

Keyboard scan matrix (columns = output lines C4…P20; rows = scan lines P30–P37):

	C4	C3	C2	C1	P27	P26	P25	P24	P23	P22	P21	P20
P37		FUNC				EL BACKLIT		S.UP				+/−
P36		DISP	GAME	CODE	INS	DEL		S.DOWN			%	MRC
P35	TEL	TIME	CALE	EXPE	SCH	ANNV	TODO	CONV	MEMO	CALC	SQU	M−
P34	Q	W	E	R	T	Y	U	I	O	P	C/CE	M+
P33	A	S	D	F	G	H	J	K	L	7	8	9
P32	Z	X	C	V	B	N	M	ENTER		4	5	6
P31		B.SPACE	/	@		CAPS	SPACE	SHIFT	RET	1	2	3
P30	UP	DOWN	LEFT	RIGHT	ON/OFF	/	X	|	+	.	0	=

Output lines and diodes:

- C4 — D6 — OUTPUT 11
- C3 — D7 — OUTPUT 10
- C2 — D8 — OUTPUT 9
- C1 — D9 — OUTPUT 8
- P27 — D10 — OUTPUT 7
- P26 — D11 — OUTPUT 6
- P25 — D12 — OUTPUT 5
- P24 — D13 — OUTPUT 4
- P23 — D14 — OUTPUT 3
- P22 — D15 — OUTPUT 2
- P21 — D16 — OUTPUT 1
- P20 — D17 — OUTPUT 0

Encoder: LS4148×12 — INPUT 0 … INPUT 7 → PORT 3 [0..7]

7. **LSI PIN FUNCTION**

CPU (LC868016A): U1

Pin No.	Name	I/O	Function
1	VDD	I	Power supply for this CPU
2~65	S1~48,C1~16	O	Common signals to LCD
66	V1	O	
67	V2	O	
68	V3	O	Bias power supply to LCD
69	V4	O	
70	V5	O	
71	VLCD	O	Power supply to LCD
78	VSS	—	Ground for this CPU
80	P41	O	Clock for LCD driver LSI(U2, U3:LC868900)
82	P43	O	Signal to LCD driver LSI(U2, U3:LC868900)(AC voltage is supplied to LCD by this signal.)
84	P46	O	Read signal to RAM(U42, U62) and LCD driver LSI(U2, U3:LC868900)
85	P47	O	Write signal to RAM(U42, U62) and LCD driver LSI(U2, U3:LC868900)
87	P71	I	Detection of low battery voltage(=2.5V) from IC(U2:S80725)
90	P10	O	Serial data output to another unit or a personal computer
91	P11	I	Serial data input from another unit or a personal computer
93	P13	O	Control signal to power supply IC(DC/AC inverter IC) for EL (H: EL-OFF/L: EL-ON)
96	P16	O	Control signal for buzzer(H: buzzer-ON/L: buzzer-OFF)
98	P57	O	Chip select to LCD driver LSI(U3:LC868900)
99	P56	O	Chip select to LCD driver LSI(U2:LC868900)
101	P54	O	Clock to IC(U8:74HC273) for the keyboard data latch
102	P53	O	Control signal to LCD driver LSI(U2, U3:LC868900)
104	P51	O	Address bus to RAM(U42, U62)
105	P50	O	Address bus to ROM(U5)
106	VDD1	O	Power supply for this CPU
107	P30	I	
108	P31	I	
109	P32	I	
110	P33	I	Signals for key assign from keyboard
111	P34	I	
112	P35	I	
113	P36	I	
114	P37	I	
115	P00	I/O	
116	P01	I/O	
117	P02	I/O	
118	P03	I/O	Address bus to the address data latch IC(U7:74HC373)
119	P04	I/O	
120	P05	I/O	
121	P06	I/O	
122	P07	I/O	
123	P20	O	
124	P21	O	
125	P22	O	
126	P23	O	Address bus to ROM(U5) and RAM(U42, U62)
127	P24	O	
128	P25	O	
129	P26	O	
130	P27	O	
131	ADLC	O	Control signal to the address data latch IC(U7:74HC373)
132	-EROE	O	Chip select to ROM(U5)
133	-RST	I	Reset signal for this CPU and LCD driver LSI(U2, U3:LC868900)
134	XT1	I	Timer clock for this CPU
135	XT2	O	
136	VSS	—	Ground for this CPU
137	CF1	I	Main clock for this CPU
138	CF2	O	

8. DISASSEMBLY

① Remove two screws then remove the battery cover.
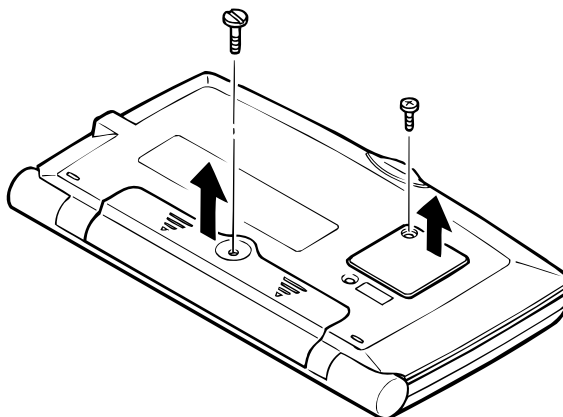
② Remove three screws.
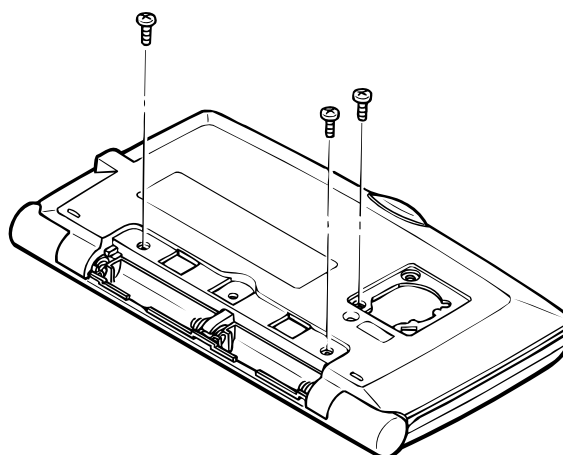
③ Open the unit and remove two screws behind the display plate.

Display plate
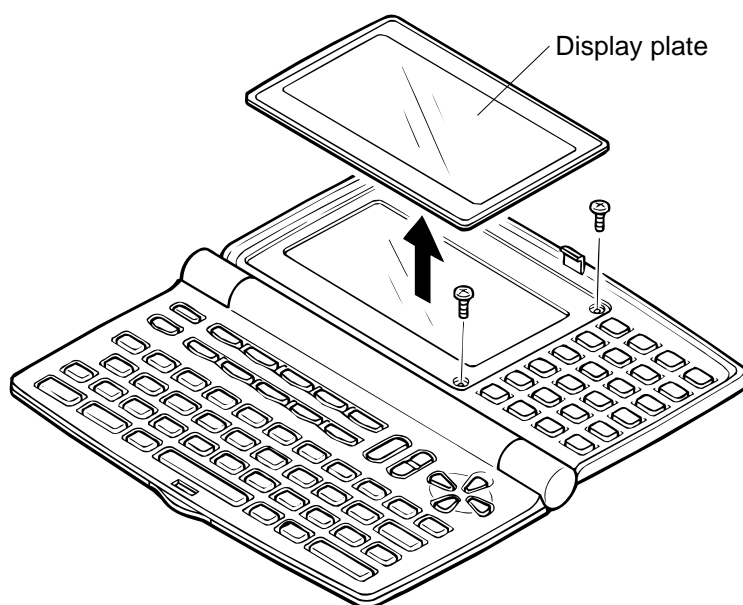
④ Remove Lower cabinet (keyboard).

Lower cabinet
(keyboard)
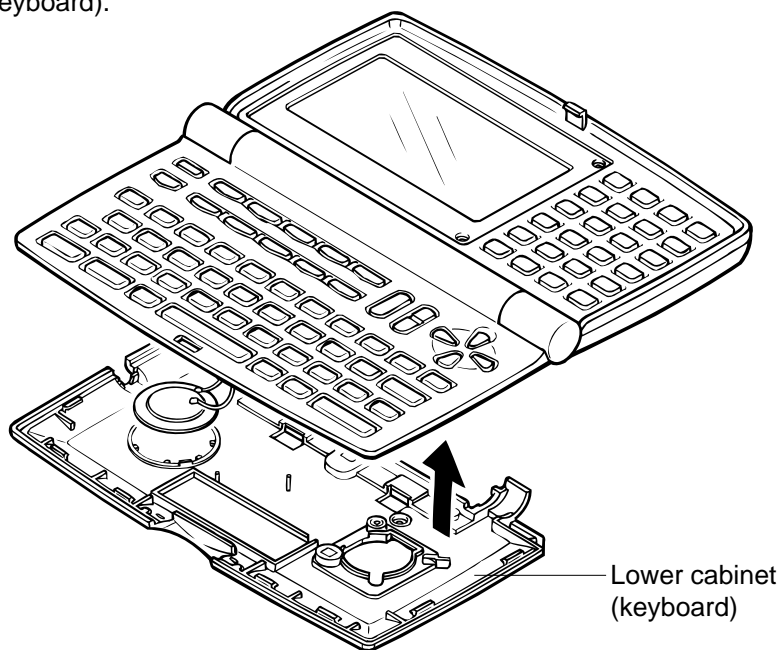
⑤ Remove Rubber key and knob.

Rubber key
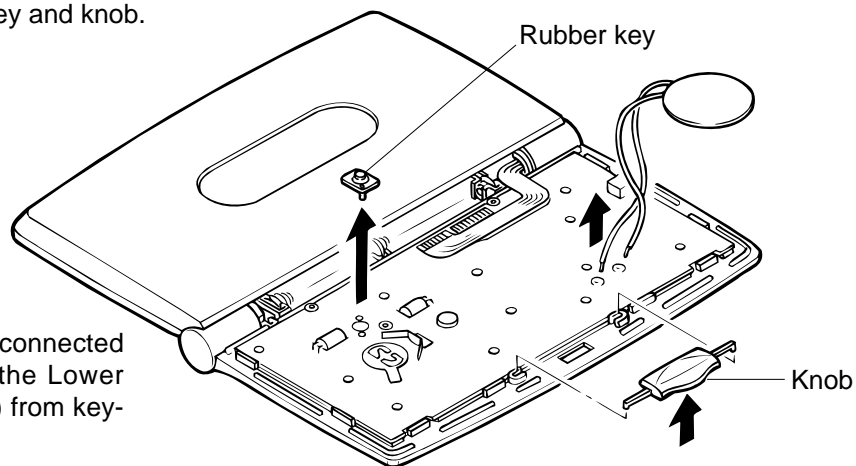
⑥ Desolder the wire connected to the buzzer on the Lower cabinet (keyboard) from keyboard PCB ass'y.

Knob

⑦ Remove Lower cabinet (display).

Lower cabinet
(display)
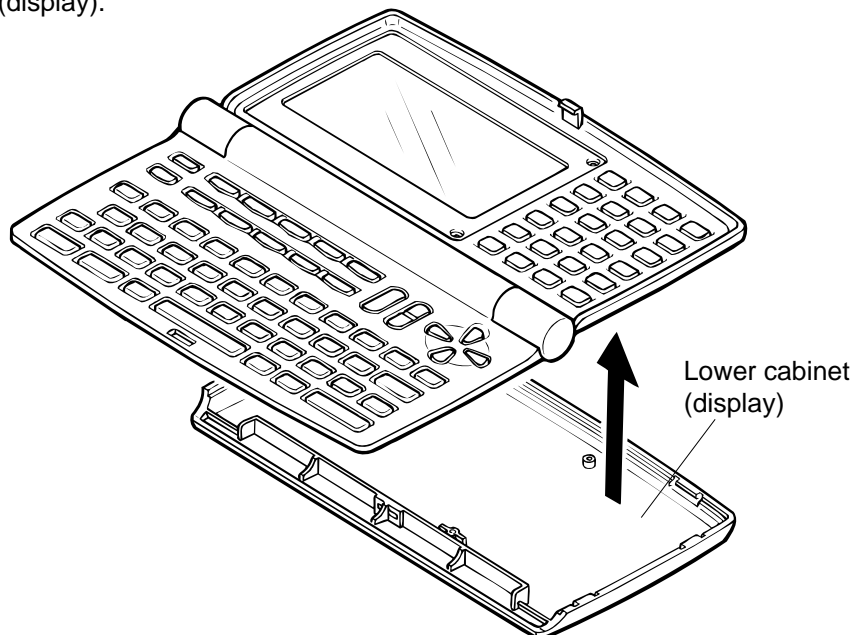
⑧ Remove screws on PCB shown above then remove PCB ass'y.

Main PCB
(11 screws)

Keyboard PCB
(13 screws)
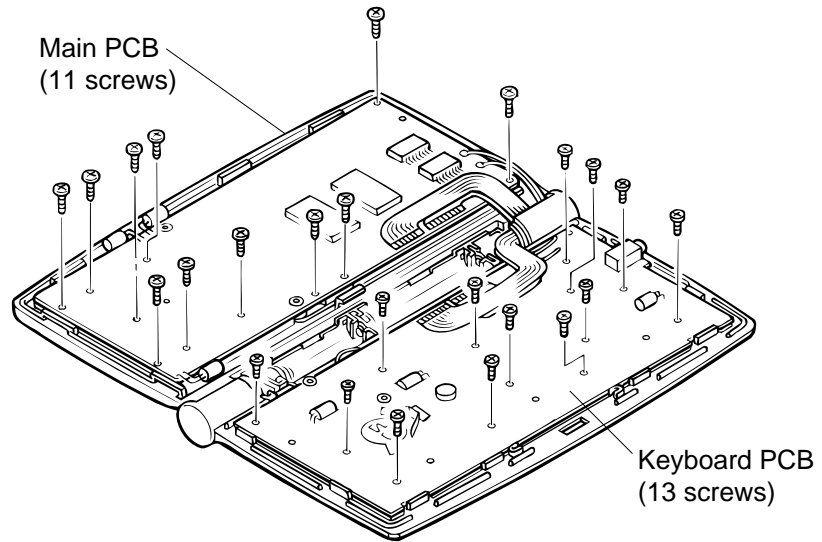
⑨ Separate upper cabinets.
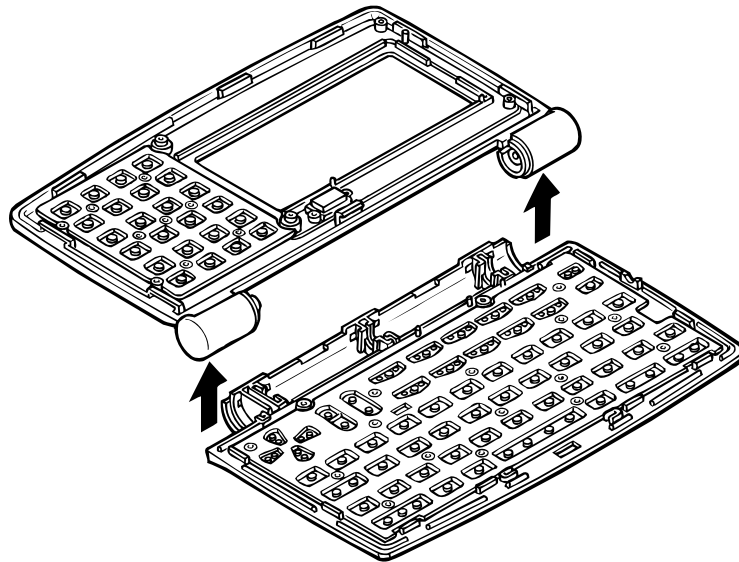
REMARK:

Heat seal and wires must be placed inside of the hinge in order for the Lower cabinet (keyboard) to fit into place.
If heat seal and wires are placed improperly, they are damaged.

Heat seal

Wires (Black/Red)

Hinge

Lower cabinet

9. PARTS LIST

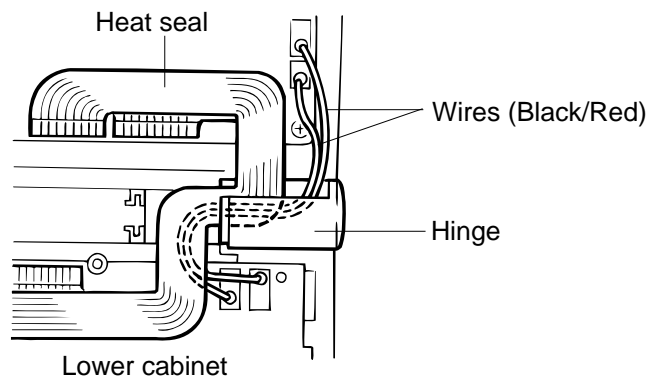| N	Item	Code No.	Parts Name	Specification	Applicable	Q	R
			Z876-1 ASS'Y				
	* There are two type of Z876-1 ASS'Ys in SF-5780E--A type & B type.						
	U7	2114 5771	TTL-IC	CMO-09-HC373	Common	1	B
	U8	2114 5770	TTL-IC	CMO-09-HC273	Common	1	B
	U62	2012 5520	LSI	CMO-02-128NC-01	SF-5580E	1	B
	* U42, U62	2012 5520	LSI	CMO-02-128NC-01	SF-5780E, A-type	2	B
	* U62	2012 5519	LSI	CMO-02-256SN-01	SF-5780E, B-type	1	B
	U42, U62	2012 5519	LSI	CMO-02-256SN-01	SF-5980E	2	B
	XT1	2590 2691	Oscillator	RER-01-12	Common	1	B
	XT2	2590 2690	Crystal oscillator	QUA-02-26	Common	1	B
	Q30	2259 2712	Transistor	TRR-01-M6	Common	1	C
	D2~D17	2390 3005	Diode	DIO-01-LS4148	Common	16	C
N	L3	6420 1950	Coil	C01-02-4615	Common	1	C
			The following electronic parts will be not supplied from CASIO.				
	R7		Chip resister(1.5KW)	RES-01-1.5K	Common	1	
	R15~16		Chip resister(1MW)	RES-01-1M	Common	2	
	R24		Chip resister(100KW)	RES-01-100K	Common	1	
	R30		Chip resister(220W)	RES-01-220	Common	1	
	R31		Chip resister(10KW)	RES-01-10K	Common	1	
	C1~2		Chip capacitor(33pF)	CAP-01-33	Common	2	
	C3~4		Chip capacitor(18pF)	CAP-01-18	Common	2	
	C7~14, C16~21, C31, C34		Chip capacitor(0.1mF)	CAP-01-01	Common	16	
	C15		Electrolytic capacitor(10mF)	CAP-02-10-25	Common	1	
	C30		Chip capacitor(15nF)	CAP-01-0015	Common	1	
	C32		Chip capacitor(68pF)	CAP-01-68	Common	1	
	C33		Chip capacitor(1mF)	CAP-02-1-50	Common	1	
			Z876-2 ASS'Y				
	U2	2114 5768	IC	CMO-14-80715	Common	1	C
	U3	3065 0708	IC	CMO-10-R1501B	Common	1	C
	Q2, Q10	2259 2713	Transistor	TRR-01-NPNL6	Common	2	C
	D1	2390 3005	Diode	DIO-01-LS4148	Common	1	C
	D20	2390 3004	Schottky diode	DIO-03-BAT43	Common	1	C
	L2	6419 6430	Coil	COI-02-4630	Common	1	C
	L4	3122 3509	Inductor	IND-01-120	Common	1	C
	1	3502 2225	Mini jack	JCK-01-1169	Common	1	C
	2	6419 6460	Battery plate +	BAC-01-988+	Common	1	C
	3	6419 6470	Battery plate -	BAC-01-988-	Common	1	C
			The following electronic parts will be not supplied from CASIO.				
	R1		Chip resister(100KW)	RES-01-100K	Common	1	
	R8		Chip resister(1kW)	RES-01-1K	Common	1	
	R9		Chip resister(10KW)	RES-01-10K	Common	1	
	R17		Chip resister(1MW)	RES-01-1M	Common	1	
	R18, R60		Chip resister(100W)	RES-01-100	Common	2	

Notes: N – New parts
R – A : Essential
Q – Quantity used per unit
B : Stock recommended
R – Rank
C : Others
X : No stock recommended

N	Item	Code No.	Parts Name	Specification	Applicable	Q	R
	R25		Chip resister(1.8kW)	RES-01-1.8K	Common	1	
	R28		Chip resister(47KW)	RES-01-47K	Common	1	
	C5		Chip capacitor(0.1mF)	CAP-01-01	Common	1	
	C6~7, C35		Electrolytic capacitor(100mF)	CAP-02-100-25	Common	3	
	C24		Chip capacitor(4700pF)	CAP-01-4700	Common	1	
	C36		Tantalum capacitor(10mF)	CAP-04-10-6.3	Common	1	
		PCB ASSEMBLY					
N	4	6420 1880	Z876-1 ass'y	C341328A*5	SF-5580E	1	B
N	4	6420 1890	Z876-1 ass'y	C341328A*6	SF-5780E	1	B
N	4	6420 1900	Z876-1 ass'y	C341328A*7	SF-5980E	1	B
	5	6419 7320	Z876-2 ass'y	C341329*1	Common	1	B
	6	5610 9420	Heat seal	HES-03-ZX876A	Common	1	B
	7	5610 9430	Heat seal	HES-03-ZX876B	Common	1	B
	8	5610 9440	Heat seal	HES-01-161055	Common	1	B
	9	3502 2224	Heat seal	HES-01-064065	Common	1	B
	10	3335 6535	LCD	LCD-03-ZX876	Common	1	B
	11	3312 0057	EL	LAM-03-ZX876	Common	1	B
		COMPONENTS					
	12	6419 6180	Rubber key	KEY-04-ZX876A-1	SF-5580E	1	C
	12	6419 6190	Rubber key	KEY-04-ZX876A-2	SF-5780E	1	C
	12	6419 6200	Rubber key	KEY-04-ZX876A-3	SF-5980E	1	C
	13	6419 6210	Upper cabinet(display)	HOU-04-ZX876-00	SF-5580E	1	C
	13	6419 6220	Upper cabinet(display)	HOU-04-ZX876-01	SF-5780E	1	C
	13	6419 6230	Upper cabinet(display)	HOU-04-ZX876-02	SF-5980E	1	C
	14	6419 6240	Pad	CON-05-507327	Common	2	X
	15	6419 6250	Lower cabinet(keyboard)	HOU-02-ZX876-00	SF-5580E	1	C
	15	6419 6270	Lower cabinet(keyboard)	HOU-02-ZX876-02	SF-5780E	1	C
	15	6419 6290	Lower cabinet(keyboard)	HOU-02-ZX876-04	SF-5980E	1	C
	16	6419 6310	Upper cabinet(keyboard)	HOU-01-ZX876-00	SF-5580E	1	C
	16	6419 6320	Upper cabinet(keyboard)	HOU-01-ZX876-01	SF-5780E	1	C
	16	6419 6330	Upper cabinet(keyboard)	HOU-01-ZX876-02	SF-5980E	1	C
	17	6419 6340	Hinge rubber	HIN-01-ZX-876	Common	1	X
	18	6419 6350	Rubber key	KEY-04-ZX876B-1	SF-5580E	1	C
	18	6419 6360	Rubber key	KEY-04-ZX876B-2	SF-5780E	1	C
	18	6419 6370	Rubber key	KEY-04-ZX876B-3	SF-5980E	1	C
	19	6419 6400	Steel nut	NUT-02-M1.7	Common	2	X
	20	6419 6050	Battery spring	BAC-01-ZX876-	Common	1	X
	21	6419 6060	Battery spring	BAC-01-ZX876+/-	Common	1	X
	22	6419 6100	Battery spring	BAC-01-ZX876+	Common	1	X
	23	6419 6080	Rubber key	KEY-03-U100	Common	1	C
	24	6419 6120	Knob	LOC-01-ZX876-00	SF-5580E	1	C
	24	6419 6130	Knob	LOC-01-ZX876-01	SF-5780E	1	C
	24	6419 6140	Knob	LOC-01-ZX876-02	SF-5980E	1	C
	25	3122 3508	Buzzer	BUZ-02-27	Common	1	X
N	26	3851 2068	Display plate	LEN-01-ZX877-00	SF-5580E	1	B
N	26	3851 2069	Display plate	LEN-01-ZX877-01	SF-5780E	1	B
N	26	3851 2070	Display plate	LEN-01-ZX877-02	SF-5980E	1	B
	27	6419 5720	Lower cabinet(display)	HOU-03-ZX876-00	SF-5580E	1	C
	27	6419 5730	Lower cabinet(display)	HOU-03-ZX876-01	SF-5780E	1	C
	27	6419 5740	Lower cabinet(display)	HOU-03-ZX876-02	SF-5980E	1	C

Notes: N – New parts   R – A : Essential
                  Q – Quantity used per unit   B : Stock recommended
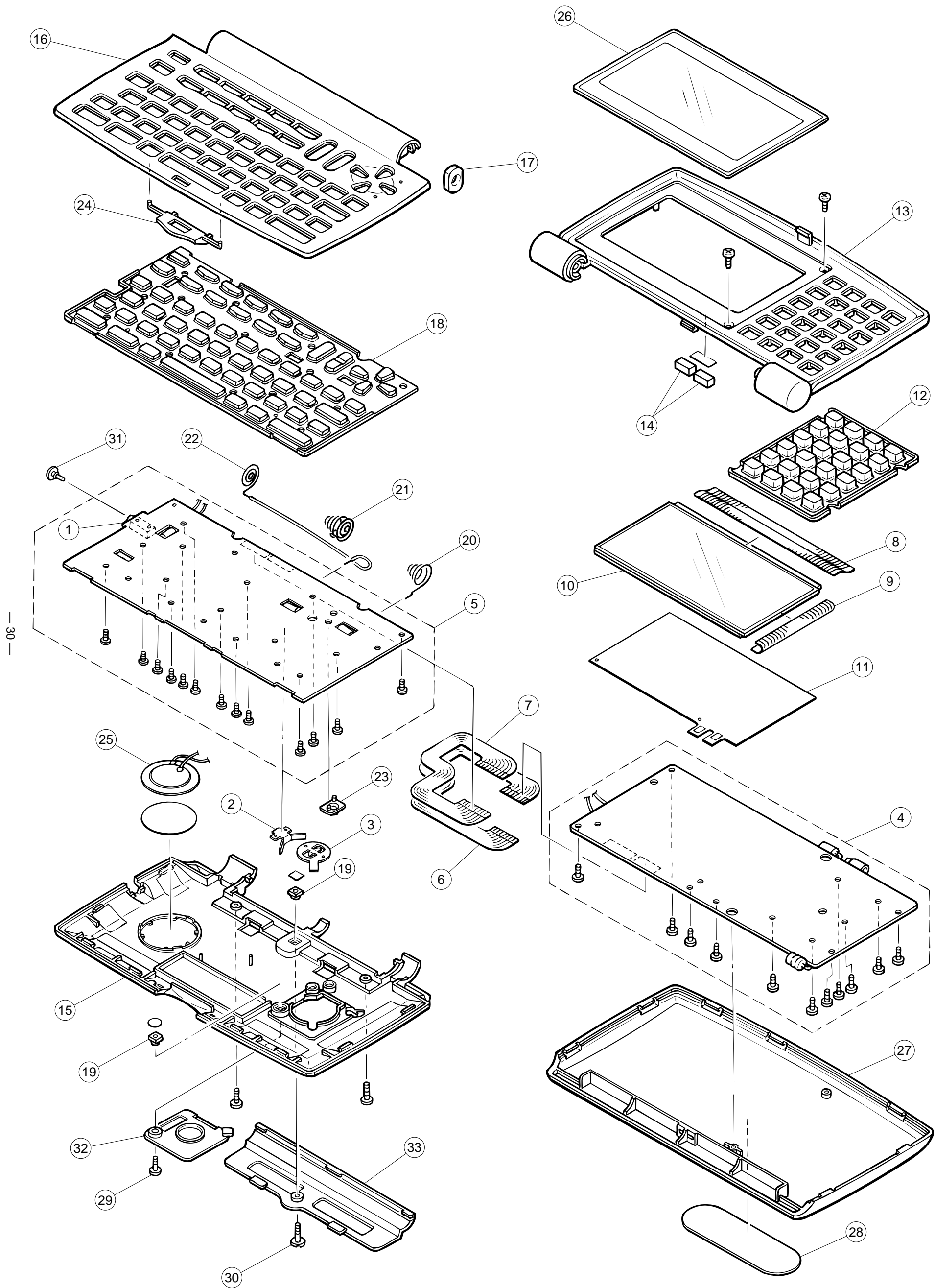   R – Rank   C : Others
                                                                  X : No stock recommended

N	Item	Code No.	Parts Name	Specification	Applicable	Q	R
N	28	6420 1920	Plate	INL-01-ZX877-00	SF-5580E	1	C
N	28	6420 1930	Plate	INL-01-ZX877-01	SF-5780E	1	C
N	28	6420 1940	Plate	INL-01-ZX877-02	SF-5980E	1	C
	29	6419 5820	Screw	SCR-01-1740PMTB	Common	1	C
	30	6419 5830	Screw	SCR-01-1735PBBK	Common	1	C
	31	6419 5850	Jack cover	JCK-02-ZX876	Common	1	C
	32	6419 5890	Battery cover	BAD-02-ZX876-00	SF-5580E	1	C
	32	6419 5900	Battery cover	BAD-02-ZX876-01	SF-5780E	1	C
	32	6419 5910	Battery cover	BAD-02-ZX876-02	SF-5980E	1	C
	33	6419 5920	Battery cover	BAD-01-ZX876-00	SF-5580E	1	C
	33	6419 5930	Battery cover	BAD-01-ZX876-01	SF-5780E	1	C
	33	6419 5940	Battery cover	BAD-01-ZX876-02	SF-5980E	1	C

Notes:　N － New parts　　　　　　　　　　　　　　　R － A : Essential
　　　　　Q － Quantity used per unit　　　　　　　　　　　　 B : Stock recommended
　　　　　R － Rank　　　　　　　　　　　　　　　　　　　　 C : Others
　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　 X : No stock recommended

10. EXPLODED VIEW

MA0200171A